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ORDINARY MEETING, MARCH 15, 1869.

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CHARLES BROOKE, ESQ., M.A., F.R.S., VICE-PRESIDENT, IN THE CHAIR.

The Minutes of the last Meeting were read and confirmed. The Rev. Mr. DAVISON then read the following paper :--

ON THE NOACHIAN DELUGE. By the Rev. M. DAVISON, Mem. Vict. Inst.

T was at the battle of Sadowa, if I remember rightly, **___** and at the very moment when the victorious Prussians were everywhere driving back the foe, that, by an unaccountable mistake, an Austrian battalion turned their weapons against their companions in arms, and thus contributed not only to the confusion of a disastrous retreat, but also to the sickening sights of that terrible battle-field. If such a blunder as this seldom occurs when hostile armies meet, it is to be regretted that it is of such frequent occurrence when the champions who occupy the field are, on the one side, the representatives of Infidelity, and, on the other side, the representatives of Science and the representatives of the Bible. Continually are we compelled to witness the unseemly and humiliating spectacle of the hosts of Infidelity resting on their rusty arms, while the soldiers of Science and the soldiers of Scripture, who should form one invincible army, are assailing each other with those powerful weapons, which, if turned against the common foe, would secure a speedy and decisive victory. Nor can we help apportioning the blame of this blunder pretty equally. Scientific students are to blame, inasmuch as they ignore that Book which professes to give authoritative information upon many topics to the investigation of which they address themselves. And theologians are to blame, inasmuch as they look with suspicion upon natural science, and, as a class, reject its undoubted teachings, when these come into collision, not with the inspired declarations of the Bible, but with human interpretations of these inspired declarations. Now it cannot be too often reiterated, that God has revealed himself in Nature, as well as in the Bible, and that, therefore, the two revelations must be harmonious. The ĸ

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revelations cannot be antagonistic, for if so, we should have God in the Bible denying himself in nature. Antagonism, where it exists, must arise from insufficient knowledge, or from too hasty generalizations on the part of men, and by no means from contradictions in the revelations which God has given of himself. The revelation of God in Nature is certainly not at all so full as the revelation of God in the Bible. Nature tells us that there is a God, and she tells us not a little also, of his wisdom, power, and goodness; but toward the solution of such questions as the nature of Deity, the creation of the universe, the origin of evil, the possibility and the plan of pardon, Nature gives us no assistance. For satisfactory information upon such momentous questions as these, we must turn to that Book, one of the most striking evidences of the divine authority of which is, that it concerns itself almost entirely with the solution of enigmas, which humanity, in all ages, has attempted, but attempted in vain, to solve. Still, while Nature propounds many questions which she cannot answer, we are not on that account to ignore the information which she supplies regarding the works and ways of the Great Creator. Her revelations are not so extensive as those which the Bible contains; but they are quite as authoritative, and quite as sacred. Once let the facts and the principles of Natural Science be firmly established, and they are revelations from God, as sacred as those commands which with his own finger Jehovah wrote on Sinai, or as that royal manifesto which Immanuel proclaimed from the Mount of Beatitudes. Hence the frequency with which the Biblical writers appeal to the revelation of God in Nature, and make that revelation the basis of the majestic superstructure which they were inspired Does Isaiah wish to strengthen the faith of the to rear. Lord's people in Jehovah's power? He points them to the stars; bids them remember who created, and who upholds them; and thus enforces, with resistless power, the lesson, that the Everlasting God, the Lord, the Creator of the ends of the earth, fainteth not, neither is weary, that there is no searching of his understanding. Does our Lord wish to animate his followers with confidence in the special providence of God? He points them to the lilies, to the sparrows, and bids them trust in Him, without whose permission the lily fades not, and the sparrow falls not to the ground. And what we plead for now is, that Christ's followers should imitate prophets, apostles, and the Master himself, in recognizing God's revelation in Nature, and in using it in the interpretation of his higher revelation in the Bible; that they should thankfully accept of all the light which Geology can cast upon

the Mosaic Cosmogony, or the narrative of the Deluge; and that thus, the Interpreters of Nature and the Interpreters of Scripture fighting no longer against each other, or standing coldly aloof; but shoulder to shoulder in the great battle for the truth, should unitedly carry their splendid spoils to His altar, who is at once the God of Nature and the God of the Bible—the Great Creator and the Great Redeemer. This spirit, becoming alike the philosopher and the Christian, we must endeavour to carry into the investigations which are now to occupy our attention.

So much has been written upon the Noachian Deluge, both before and since Geology took its place among the sciences, that it would be presumptuous to pretend to originality in this paper. My business is not so much to discover, as to examine carefully what laborious explorers have already discovered. I occupy the position, not so much of a barrister, who skilfully arranges his evidence so as to procure a verdict in his favour, as of a judge, who reviews and sifts the evidence which has been presented, in order that truth may triumph.

If such an occurrence took place as that Deluge which is reported in the Book of Genesis, we might reasonably expect that traditions of it, more or less correct, would be found floating through all ages and in all countries. A devastating Flood which destroyed the whole human race save those eight persons who were miraculously preserved in the ark, would be sure to leave an indelible impression upon the world's memory. Hence, if the history of the Deluge contained in the Bible had been unsupported by widely diffused traditions. there would have been some reason for the existence of doubts as to the occurrence of such a catastrophe. But just as we have in the Elysian Fields and in the Golden Age, which bathed their first inhabitants in blessedness, traditions of that Paradise, in which, in a state of holy innocence, God placed the progenitors of our race, so have we, on every hand, traditions of the Deluge, by which "the world of the ungodly" was swept of its inhabitants. So redundant are these traditions, that in the examination of them, one scarcely knows where to begin, or what outstanding illustrations to fix upon. The island of Atlantis, at the suggestion of Jupiter, immersed in the Ocean, in order that the depravity of its inhabitants might be washed away; the prominence given to an ark, or ship, in many of the heathen mysteries; the representations of undoubted facts in the Noachian history, on the coins of Greece and among the hieroglyphics of Egypt; the picture on the famous Apamæan medal, belonging to the time of the

elder Philip, of a man and woman, in one compartment, sitting in a floating ark, with a bird carrying a branch above them, and in another compartment, leaving the ark, on which the letters N Ω E* are inscribed; the curious Mexican painting, copied by Humboldt, in which the "man and woman who survived the age of water" are represented safe in an arklike structure, while the goddess of water is deluging the world-these remarkable traditions can be explained from no other standpoint than that which assigns to the Noachian Deluge a place among the undoubted facts of history. Without going so far as Bryant, who in his Ancient Mythology contends that traditions of the Deluge form the basis of all Heathen worship, and that all the ideal gods of the Heathen world were representatives of Noah, and those who were saved with him in the ark,—without at all going so far as this, I am prepared to maintain, that in the mythology of the ancients, apart altogether from the testimony of the Divine Word, there is more than sufficient to prove, that in the remote past, some such catastrophe as the Noachian Deluge did undoubtedly take place.

MYTHOLOGICAL.

In the Egyptian mythology we read of Osiris being enticed into an ark by Typhon, apparently a personification of the Ocean; of the ark being sealed, and thrown into the sea, till, after sundry tossings, it is cast on the coast of Byblus; while among the hyroglyphics, we meet with the Deity coming forth from the flood, as a child upon a water-lily. It cannot be denied that the traditions about Osiris are mixed up to a great extent, as was indeed natural, with overflowings of the Nile, but there is enough in the outstanding incidents to justify Professor Hitchcock's remark, that Osiris is "the Noah of Egypt."

The Assyrian tradition, which Berosus copied from the records of the Temple of Belus at Babylon, points most dis-

* I am not forgetful that attempts have been made to demonstrate that these letters have no reference to the name of Noah; but as Bryant in his *Vindication of the Apamœan Medal* has well replied—"The history still would remain in legible characters, independent of the inscription. Thus, take away the letters NOE, or assign them to a different purpose than the name of Noah, yet the historical part of the coin can neither be obliterated nor changed. The ark upon the waters, and the persons in the ark, will still remain; the dove, too, and the olive will be seen; and the great event to which they allude will be too manifest to be mistaken." tinctly to the Deluge of Scripture. In visions of the night, we are told, the god Chronus appeared to Xisuthrus, then monarch of Babylon, warned him that a flood was imminent which would destroy the race, and commanded him to write a history of the past, and bury the document in the city of the Sun at Sippara. This done, the monarch built a huge vessel, put his family, property, and sundry animals on board, and waited for the threatened flood. It came that very day, but when the work of destruction was effected, the waters began to decrease. Xisuthrus then sent out birds, which finding no resting-place, returned. After a while he sent out others, which came back with mud upon their feet. Encouraged by this evidence of the abating waters, he despatched them a third Then he quitted his vessel, and time. They returned not. concerned himself with building cities and re-peopling the earth. With a change of names this remarkable record might be accepted as, on the whole, an accurate epitome of the Mosaic history of the Deluge.

The Hindoo mythology introduces us to a demon named Hayagriva, who stole the Vedas from Brahma. In consequence of this abstraction of the sacred Books, the whole race, with the exception of a prince and a few followers, became utterly corrupt. One day, while the good prince was bathing, Vishnu appeared to him in the form of a fish, which, increasing in size as it was removed to various waters, was at length placed in the Ocean. Then the fish-god spoke. He warned the prince that in seven days a deluge would sweep the depraved race from the face of the earth, assured him that a vessel would be provided in which he would find protection during the catastrophe, and commanded him to put his family, sundry animals, and a sufficient store of food on board. This done, the threatened deluge came; but amidst the surging waters the god-provided vessel was safe, being moored by the great sea-serpent to Vishnu's horn.

The story contained in the Persian Zendavesta, divested of its Oriental drapery, may be briefly stated thus:—Ahriman, the Evil One, having corrupted the world, the divine man-bull was commissioned to destroy it, which he did by bringing upon it a universal flood. In this deluge the entire race perished.

The Chinese also give us characteristically grandiloquent accounts of a deluge which overspread the whole earth, "and separated the higher from the lower age of mankind."

The Scandinavian tradition assumes, as might be expected, a horrible form. Their entire mythology is monstrous. Nor is this to be wondered at, when we remember the gloomy mountains, the deep, dark fiords, and the long dreary winters, with which the old Scandinavians were familiar. Their Paganism was sure to be of a sombre and even monstrous aspect. Hence their strange version of the Deluge. It was caused by the slaying of the giant Ymir, whose blood deluged the whole world and drowned its inhabitants, with the exception of a giant who happened at the time to be on board ship!

According to the Druids, the story of the Deluge runs thus —In consequence of the universal wickedness of mankind, the Great God, by means of a violent wind, sent a virulent poison upon the earth. Death was inhaled with every breath. A holy patriarch, however, and his company, were shut up within strong doors, through which the poison penetrated not. The poisonous wind was succeeded by a tempest of fire, which rent the earth asunder. Then the sea was flung upon Britain, the rain descended in torrents, and the whole country was submerged. The flood which thus washed away the impurities of the land bore up the vessel in which the patriarch and his friends were preserved, till the waters had been drained off, and they commenced the cultivation of a renovated earth.

In the New World we meet with similar traditions of the Deluge. A story comes down to us from the Aborigines of Cuba to the effect, that "an old man, knowing the Deluge was to come, built a great ship and went into it with his family and abundance of animals, and that wearying during the continuance of the flood, he sent out a crow, which at first did not return, staying to feed on the dead bodies, but afterwards returned, bearing with it a green branch." In Peru the Indians had a tradition that, long before the time of the Incas, the entire race, with the exception of six, who were saved on a float, were destroyed. Indeed, so universal did Humboldt find these traditions to be among the native tribes of America, and so remarkable in their resemblance to the Mosaic narrative of the Flood, that he at one time regarded them merely as fragments of the teaching of early missionaries; but on mature consideration he abandoned this hypothesis. "He even set himself," says Miller, in his Testimony of the Rocks, "when collecting the traditions of the Indians of the Orinoco, to examine whether the district was not a fossiliferous one, and whether beds of sea-shells or deposits charged with the petrified remains of corals, or of fishes. might not have originated among the Aborigines some mere myth of a great inundation sufficient to account for the appearances in the rocks. But he found that the region was mainly a primary one, in which he could detect only a single

patch of sedimentary rock, existing in an unfossiliferous sandstone. And so, though little prejudiced in favour of the Mosaic record, he could not avoid arriving at the conclusion that the legend of the Maypures and Tamanacs, regarding a great destructive deluge, was simply one of the many forms of that oldest of traditions, which appears to be well-nigh co-existive with the human family, and which, in all its varied editions, seems to point at one and the same signal event."

But undoubtedly the most remarkable of all the traditions of the Deluge which have come down to our day, is that with which the Greeks familiarize us in connection with Deucalion. Claimed as king, both by the people of Thessaly and by the Syrians, it is extremely difficult to say anything more definite about Deucalion, than that he occupies a prominent place in Grecian mythology. Nor, indeed, for our present purpose, is it at all necessary to occupy ourselves with unravelling his mythical history. In Deucalion's time-so the tradition runs ----the human race had degenerated into universal corruption and violence. Everywhere wickedness reigned, till heaven's just judgment was executed. Deluging rains descended till the sea rose over the dry land, and the whole earth was covered by the flood. Every living thing was drowned except those which Deucalion preserved. Having provided himself with an immense ark, he caused his family and his sons' wives to take refuge in it, as also pairs of various animals, which during the flood lived together in perfect amity. The ark ultimately rested on Mount Parnassus. We all remember the sequel-how Deucalion and his wife, Pyrrha, consulting the oracle at Themis, were commanded to re-people the earth by throwing over their shoulders the bones of their great mother-how Deucalion interpreted this to mean the stones, which might be regarded as the bones of grandmother earth -and how the stones which were flung by Deucalion became men; while those which Pyrrha flung became women.

This rapid, and therefore imperfect, review of the testimony of world-wide Paganism to the occurrence of such a Deluge as is recorded in Genesis, is both interesting and important. It is interesting as showing the deep, the indelible impression, which this terrible judgment made upon the world's memory, and as showing also the necessity of a written revelation, if the grand and solemn transactions of Jehovah with men are to be handed down to future generations in the sublime garb of truth. It is also important as a striking confirmation of the truthfulness of the Mosaic narrative of the Deluge. However distorted the story may appear as read through the curious lenses which mythology supplies; whatever varieties may be presented in the names, the occupations, the numbers of those who are represented as having been saved; however intermingled the details may be with local deities, and local deluges, and local imagery; the outstanding facts, stripped of their fanciful drapery, can be satisfactorily explained only from the standpoint of the truthfulness of the Old Testament record. deity, prince, or patriarch saved when the whole wicked world

That

besides was destroyed; that Flood by which the corrupt race was swept away ; that boat, ship, or ark, in which those found a refuge who were saved; that bird, sent forth when the waters began to abate; that leaf or branch which it brought to the ark; these remarkable facts, which we find scattered with more or less distinctness throughout mythologies belonging to all nations and to almost all stages of civilization, admit of no explanation but that which regards them as distorted traditions of that catastrophe which might well imprint itself indelibly on the memory of the human race-the Noachian Deluge.

GEOLOGICAL.

Mythology, as we have just seen, supplies us with many interesting confirmations of the truth of the Mosaic narrative regarding the Deluge. Does Geology add to these confirmations, or the contrary? Seventy years ago this question would have been answered most confidently in the affirmative, even by those who marched in the van of Geological science. Were there not rocks in all countries, containing the remains of animals and plants? Were there not superficial deposits of sand, clay, and gravel, manifestly the result of such a Flood as that which is identified with the history of Noah? Were there not scattered over the face of the whole world immense boulders, removed by hundreds of miles from their parent rocks, which only a tremendous rush of water could have carried to the positions which they now occupy? Were there not caves strewed with bones of animals, which had been carried on the face of the Deluge, till they were finally deposited in these rocky sepulchres? Were there not shells, manifestly of various marine species, found in localities hundreds of miles from the sea; nay, were they not frequently found far up the sides, and even sometimes on the summits, of lofty mountains ? With such extraordinary phenomena as these before them, our fathers were confident that a universal deluge could be denied only by those who were incapable of estimating cumulative evidence, perplexing from its very abundance. Nor is it to be forgotten, that among those who referred such phenomena as the above to the action of the Deluge, the names of Buckland and Sedgwick might once have been numbered.

Like Augustine with his *Confessions*, however, they ultimately published their recantations. Here is Dr. Buckland's (*Bridgewater Treatise*, vol. i. page 94) :--

"Discoveries which have been made since the publication of this work ('Reliquiæ Diluvianæ') show that many of the animals therein described existed during more than one geological period preceding the catastrophe by which they were extirpated. Hence it seems more probable, that the event in question was the last of the many geological revolutions that had been produced by violent irruptions of water rather than the comparatively tranquil inundation described in the inspired narrative. * * The large preponderance of extinct species among the animals we find in caves, and in superficial deposits of diluvium, and the non-discovery of human bones along with them, afford other strong reasons for referring these species to a period anterior to the creation of man."

And here is Sedgwick's (Geo. Soc. Proceed., vol. i. p. 313) :--

"Bearing upon this difficult question, there is, I think, one great negative conclusion now incontestably established—that the vast masses of diluvial gravel scattered almost over the surface of the earth do not belong to one violent and transitory period. It was indeed a most unwarranted conclusion, when we assumed the contemporaneity of all the superficial gravel on the earth. We saw the clearest traces of diluvial action, and we had in our sacred histories the record of a general deluge. On this double testimony it was, that we gave a unity to a vast succession of phenomena, not one of which we perfectly comprehended, and under the name diluvium classed them altogether. * * Having been myself a believer, and to the best of my power a propagator, of what I now regard as a philosophic heresy, and having more than once been quoted for opinions which I do not now maintain, I think it right, as one of my last acts, before I quit this chair, thus publicly to read my recantation."

It was impossible to study the rocks attentively without arriving at the conclusion that whatever might be the explanation of their origin and phenomena, it was certainly not the Deluge. The rocks could not have been deposited by the Deluge, as a few stoutly maintained, for they are found to consist of an endless series of strata, indicating different epochs, different climates, different predominant races. The superficial deposits could not have been deposited by the Deluge, for they are manifestly of different ages have been produced by different causes, such as rivers, lakes and the action of the sea; and contain organic remains perfectly distinct from each other. The erratic boulders found in every quarter of the globe could not have been deposited by the Deluge, for the sites which they occupy indicate that they were deposited at periods between which many ages intervened. The bonecaves could not have been furnished by the Deluge, for the alternating layers of stalagmite and remains of animals, which evidently lived, and died, and preyed upon each other for successive generations, can be explained by no sudden catastrophe like the Flood. Hence the phenomena which, less than a hundred years ago, were supposed to furnish incontestable evidence of the occurrence and the universality of the Noachian Deluge, are found to belong to a period long anterior.

Disappointing though this discovery must have been to the sanguine spirits who saw in every fossil and in every pebble evidences of a universal deluge, Geology did not send them away empty from her prolific fields. She gave them unmistakeably to understand, that she could furnish them with no proofs of the occurrence of that Deluge which is recorded in Genesis; and warned them that the facts on which they had been accustomed to rely would not sustain the evidential superstructure they were attempting to rear upon them. But while her testimony upon this point was unfaltering and decisive, she reminded them, that they had only to study her stony records in order to find endless illustrations of such catastrophes as that to which the Mosaic narrative points us. Geology could supply no proofs of the Noachian Deluge (at least so far as the general field of investigation was concerned), but she could supply a thousand proofs of occurrences of a similar kind. She could not supply the very bones of the wicked contemporaries of Noah, but she could point to the bones of many races which had successively disappeared from the globe. She could not demonstrate how the great deep overflowed the land, when "the world of the ungodly" perished, but she could point to many evidences of the sea and the dry land changing places; of mountains, like the Alps, once standing like solitary islands in the Ocean; and of majestic rivers and lakes once existing, where all that now remains of them are their buried beds. The testimony of geology, therefore, in relation to the Deluge, is most important, as establishing not only the possibility, but the probability, of such an occurrence. A catastrophe which would deluge a continent, and destroy its existing races, instead of being incredible, is, from a geological stand-point, neither strange nor unparallelled.

Some have maintained that we ought not to expect evidences of the occurrence of the Flood among the superficial deposits, since, allowing its universality, its action would not be of a violent kind. But this we cannot allow. It is impossible to conceive of such a catastrophe otherwise than as accompanied with most violent aqueous action. Conceive what a world-wide deluge implies-a depth of about five miles of water above the ordinary sea-level. Consider the causes by which it was produced-deluging rains without intermission, for six weeks, and the irruption of the sea upon the land. Then say if it is credible, that the action of such a deluge so produced should be so tranquil, as to leave no marks of its devastations? It seems to us that there is no satisfactory answer to those who point us to the absence of any such deposit as we might reasonably expect a universal deluge to leave behind it; and to the undisturbed superficial beds, over which a universal deluge must have passed; except the reply, that the Noachian Deluge being local, evidences of its occurrence can be demanded only in those regions which formed the cradle of the race, and over which the Deluge swept.

The scoriæ and ashes of which volcanic craters are for the most part composed, are well known to be of the lightest and least coherent kind. Exposed to the action of a flood, or the waves of the sea, a whole mountain of them would speedily be washed away. A case in point is afforded by the remarkable history of Graham's Island, a submarine volcano, which emerged from the sea in 1831. In a single month it rose to an altitude of 200 feet, and formed an island three miles in circumference. Yet within three months, the sea had entirely washed it away. Now in Auvergne, as everybody knows, there are extinct volcances which have not been active at least since the Adamic period. Their cones are composed of those light materials already referred to. Yet there they remain as they were before man appeared upon the world's stage. A universal deluge must have denuded them at least to their latest lava deposits, and therefore the presumption is strong, that no flood has submerged central France since these volcanoes were in a state of activity; in other words, since the Adamic race appeared upon the globe.

But while the testimony of Geology seems to me decisive against a universal deluge, it supplies interesting illustrations of the existence of forces, adequate, if the Most High so willed it, to produce this very day such a deluge as destroyed the godless race in the days of Noah. Alterations of level, both on land and in the bottom of the sea, are known to be every-day phenomena. Scandinavia is slowly but steadily rising from the sea; while the bed of the Baltic is becoming proportionably shallower. In 1556, an entire province of the mountainous part of China sank in a moment, the whole of the inhabitants being destroyed, and an extensive lake occupying the position of the once prosperous province. In 1664, during some of those fearful earthquakes with which the Chilian coast is so frequently visited, several considerable mountains belonging to the chain of the Andes entirely disappeared. In Java, the volcano Papandayang also disappeared in 1772. Passing over such remarkable phenomena as are presented by the ruins of the temple of Jupiter near Naples, and the appearance and subsequent disappearance of new islands, what can be more impressive than the accounts which have recently reached our shores of the subterranean convulsions which wrought such devastation along the entire western coast of South America, and asserted their presence even in the distant New Zealand? We have no need to go back to mythic times for marvellous stories of the earth sinking, and the sea rushing upon the land. The present generation has witnessed phenomena more than enough to convince the veriest sceptic, that there are even now at work forces which require only the fiat of Omnipotence to reproduce the cataclysm which befell the antediluvians.

Assuming that the Deluge was caused by the sinking of that part of the world which the antediluvians inhabited, and, along with floods of rain for six weeks, the consequent irruption of the sea upon the land, Dr. Pye Smith, and after him Mr. Hugh Miller, have attempted to define the area which might have been submerged. Let us state the hypothesis in Miller's own words :—

"There is a remarkable portion of the globe, chiefly in the Asiatic continent, though it extends into Europe, and which is nearly equal to all Europe in area, whose rivers (some of them, such as the Volga, the Oural, the Sihon, the Kour, and the Amoo, of great size) do not fall into the ocean, or into any of the many seas which communicate with it. They are, on the contrary, all turned inwards, if I may so express myself, losing themselves in the eastern parts of the tract, in the lakes of a rainless district, in which they supply but the waste of evaporation ; and falling in the western parts into seas, such as the Caspian and the Aral. In this region there are extensive districts still under the level of the ocean. The shore line of the Caspian, for example, is rather more than eighty-three feet beneath that of the Black Sea, and some of the great flat steppes which spread out around it, such as what is known as the Steppe of Astracan, have a mean level of about thirty feet beneath that of the Baltic. Were there a trench-like strip of country that communicated between the Caspian and the Gulf of Finland, to be depressed beneath the level of the latter sea, it would so open up the fountains of the

great deep, as to lay under water an extensive and populous region, containing the cities of Astracan and Astrabad, and many other towns and villages. With the known facts, then, regarding this depressed Asiatic region before us, let us see whether we cannot originate a theory of the Deluge, free from at least the palpable monstrosities of the older ones. Let us suppose that the human family, still amounting to several millions, though greatly reduced by exterminating wars and exhausting vices, were congregated in that tract of country which, extending eastwards from the modern Ararat to far beyond the Sea of Aral, includes the original Caucasian centre of the race; let us suppose that the hour of judgment having at length arrived, the land began gradually to sink, as the tract in the Run of Cutch sunk, in the year 1819, or as the tract in the southern part of North America, known as the "sunk country," sank in the year 1821; farther, let us suppose that the depression took place slowly and equally, for forty days together, at the rate of about 400 feet per day-a rate not twice greater than that at which the tide rises in the Straits of Magellan, and which would have rendered itself apparent as but a persistent inward flowing of the sea; let us vet farther suppose, that from mayhap some volcanic outburst, coincident with the depression and an effect of the same deep-seated cause, the atmosphere was so affected that heavy drenching rains continued to descend during the whole time, and that though they could contribute but little to the actual volume of the flood-at most only some five or six inches per day-they at least seemed to constitute one of its main causes, and added greatly to its terrors, by swelling the rivers and rushing downwards in torrents from the hills. The depression, which by extending to the Euxine Sea and the Persian Gulf on the one hand, and the Gulf of Finland on the other, would open up by three separate channels the fountains of the great deep, and which included, let us suppose, an area of about 2,000 miles each way, would at the end of the fortieth day be sunk in its centre to the depth of 16,000 feet, a depth sufficiently profound to bury the loftiest mountains of the district. . . . And when after 150 days had come and gone, the depressed hollow would have begun slowly to rise, and when after the fifth month had passed, the ark would have grounded on the summit of Mount Ararat-all that could have been seen from the upper window of the vessel, would be simply a boundless sea, roughened by tides now flowing outwards with a reversed course towards the distant ocean, by the three great outlets, which during the period of depression had given access to the waters. Noah would of course see, that 'the fountains of the deep were stopped,' and 'the waters returning from off the earth continually,' but whether the Deluge had been partial or universal, he could neither see nor know."--(Testimony of the Rocks, p. 344.)

Such is Miller's ingenious theory to show the possibility of a deluge which would overspread that portion of the globe which the antediluvians inhabited, and at the same time meet all the requirements of that Deluge, the account of which Moses has preserved. Without accepting the theory in its entirety, we yet cannot deny that it is perfectly within the region of the possible—nay, that such subsidences and elevations of the land and such irruptions of the sea as his hypothesis assumes, are among the ordinary phenomena which Geology unfolds. If Geology, therefore, both by negative and positive evidence, protests against a *universal* deluge, this is certain, that she supplies facts in lavish abundance, showing the possibility of such a deluge as we believe the sacred historian to describe, a deluge which overflowed the whole of the then inhabited world; which submerged its loftiest mountains; and which destroyed the whole of the human race, with the exception of those who found an asylum in the Ark.

GENERAL CONSIDERATIONS.

I have now to consider the difficulties which present themselves in the path of those who contend for a world-wide deluge, and which to my mind are insuperable. It is true that these difficulties have not unfrequently been insisted upon by those who were enemies to the Bible, and whose ulterior design was manifestly, by magnifying such difficulties, to invalidate the authority of the Old Testament. Bishop Colenso is one of these. In his book on the Pentateuch, he labours, first of all, to fix down the Mosaic narrative to a universal deluge, and then, by a skilful arrangement of the insurmountable difficulties, geological and general, to such universality, endeavours to shut up his readers to the conclusion that the Biblical account of the Flood is incorrect. That foes to the credibility and inspiration of the Bible, however, have adduced these difficulties with a hostile intention, is no reason why we should shut our eyes to them, and, ostrich-like, imagine that our safety lies in refusing to face the disagreeable and the dangerous. Nothing has done greater damage to that religion which it is our privilege and honour to uphold, than such unwillingness to look fairly and fully at the objections which our opponents start. What have we to be afraid of? Have we so little confidence in the foundation of our faith, that we dare not dig down to it and examine its solidity? Can we maintain the authenticity, credibility, and inspiration of Holy Scripture only by ignoring everything that has been alleged against them ? Certainly not. We have everything to hope, and nothing to fear, from a searching examination of the sacred records. We are ready to listen attentively to those who have objections to state, and who are ready to propound solutions of those objections which commend themselves to reason as well as faith. Let it not be said that we fear a thorough-going investigation. We invite it, confident as we are that the more searching it is, the more will it confirm the declaration that "the Word of the Lord endureth for ever."

The difficulties in the way of a universal Flood, therefore, which we have now to consider, must not be underrated because they have not unfrequently been stated by infidels. It is for us to determine—putting all à priori considerations aside—if they rest upon a basis of truth. And supposing this to be determined in the affirmative, it will be for us manfully to address ourselves to the discovery of the reconciliation which must always exist between what is true in nature and the immutable truths of the Divine Word.

The first difficulty which we encounter, supposing the Deluge to have been universal, is in the accommodation which the Ark afforded. To our older writers this presented no obstacle. Referring to the number of species, one of them says :--- "Bishop Wilkins has brought their number, which at first view may seem almost infinite, within very moderate bounds. He reckons that they do not amount to one hundred of quadrupeds and two hundred of birds, and of these must be excepted such as live in the water, such as proceed from a mixture of different species, and such as change their colour, size, and shape by changing their climate, and thence in different countries seem to be of different species when they are not." So Dr. Hales. "Can we doubt," he says, referring to the Ark, "of its being sufficient to contain eight persons, and about two hundred or two hundred and fifty pair of fourfooted animals; a number to which, according to Buffon, all the various distinct species may be reduced, together with all the subsistence necessary for a twelvemonth?" Since the days of Buffon and Hales, however, and earlier writers, whose remarks, prose and poetical, on this question, if we had room to transcribe them, would be most amusing, science, in every department, has progressed with gigantic strides, and in no department more rapidly than that of zoology. Sir Walter Raleigh put down the mammals at 89, and Buffon at 200 or But our latest authorities give the known 250 species. species of mammalia at 1,658, and the result of scientific inquiry is not to decrease, but to increase, the number. Johnstone, in his Physical Atlas, gives the following estimate :----

\mathbf{M} ammalia		1.658	Reptiles	642
Birds .		6,266	Insects, about	500,000

These numbers of species must of course be regarded merely as an approximation to the correct number, but an approximation not in the sense of excess but in the sense of defect. Every continent, every island that is explored, is found to contain its own species, so that, as zoological investigation advances, we must expect the list of species to be largely increased. Now, if the Deluge was universal, the whole of these must have found accommodation in the Ark. Nay, more than these, for of those which, according to the Jewish law, were reckoned "clean," Noah was commanded to take by sevens, and of those which were reckoned "unclean" by twos, so that at the least a million of living creatures must have had their habitat in the Ark for a year. Nor do the difficulties regarding accommodation end here. Nothing can be plainer from the Mosaic history than this, that none of these creatures were fed miraculously. "Take thou unto thee of all food that is eaten, and thou shalt gather it to thee, and it shall be for food for thee and for them" (Gen. vi. 21). Who will estimate the number of animals required for the support of the carnivora, and the quantity of forage required for the support of the herbivora during the twelve months of the Flood? Indeed, as a writer on this subject, Dr. King, has well remarked, the food of many animals was of such a kind as scarcely to admit of being stored up. Ant-eaters, for example, would not easily be supplied with ant-hills.

Now, will any one be bold enough to maintain that that Ark, the dimensions of which are given in the Book of Genesis, was capable of containing a tithe of those animals, which, if the Deluge was universal, must have found protection within it? Assign to it the utmost capacity that fancy has ever yet claimed for it, and it will be found impossible to accommodate even a small proportion of the animals, which, on the assumption of a world-wide flood, would need to be preserved, to say nothing of the thousands of others, which would be required if the carnivora were to be fed, and the incalculable stores of forage which would be devoured every day, during twelve months, if life were to be barely kept in the herbivora.

Another difficulty must be met by those who maintain the universality of the Deluge. It is in the transit to and from the Ark, of the animals whose habitats were separated from each other by oceans, by mountain-chains, by half the circumference of the globe. So long as science was in its infantile state, considerations like these presented no insurmountable obstacles. Regarding the animals characteristic of various countries, merely as varieties of a restricted number of species, caused by climate, food, &c., our fathers were not troubled by such difficulties as we are now compelled to face. Given an Ark, which would accommodate a few of the more familiar types of wild animals, and a fair representation of domestic animals, what more was needed? Would not the lions, the tigers, the elephants, which left the Ark, speedily multiply, make their way to the countries in which they are now found, and, through various local influences, become characterized by those diversities which, in our day, so extensively prevail? So with the varieties among domestic animals. Our forefathers were conscious of no insuperable difficulties. Species were few, though varieties were many; and if they could find room in the Ark for the few species, they did not doubt that all existing varieties would soon spring from them.

But what do naturalists tell us now? That every region of the globe has its peculiar fauna and flora; that every continent and every island have plants and animals peculiar to themselves. Not only do the fauna and flora of polar regions differ widely from the fauna and flora of the tropics, but tracts of country, lying very much in the same latitude, are characterized by animals and plants peculiar to each. So that representatives of all existing species must have found a refuge in the Ark, assuming that the Deluge was universal. We have glanced at the insurmountable difficulties which surround us when we grapple with the question of their accommodation in the Ark, but no less formidable are the difficulties when we ask how they got to the Ark. If the theory of a universal deluge be correct, we must picture to ourselves groups of animals, wending their way from every quarter of the globe, to the place where the Ark was located. We must picture them, in their laborious efforts to cross mountains crowned with eternal snow, and to transport themselves across stormy oceans, which interposed thousands of miles between their homes and the spot toward which, for months and years, they toiled. We must picture the typical animals of the polar regions, and the typical animals of the tropics, encountering climates, which, in ordinary circumstances, would destroy both, and passing through countries which afforded food neither for the one nor the other. We must picture, in a word, beasts, birds, reptiles, from every quarter of the globe and every island of the sea, making their way to the Ark, from which they were separated by mountains, rivers, oceans, and continents, thousands of miles across.

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Nor is this all. The very same difficulties would meet them when they made their exit from the Ark.

"How," says Miller, "had the Flood been universal, could even such islands as Great Britain and Ireland have ever been replenished with many of their original inhabitants? Even supposing it possible that animals, such as the red deer and the native ox, *might* have swam across the Straits of Dover, or the Irish Channel, to graze anew over deposits in which the bones and horns of their remote ancestors had been entombed long ages before, the feat would have surely been far beyond the power of such feeble natives of the soil as the mole, the hedge-hog, the shrew, the dormouse, and the fieldvole."

Equally pertinent are the remarks of Dr. Pye Smith:-

"All land animals, having their geographical regions, to which their constitutional natures are congenial—many of them being unable to live in any other situation—we cannot represent to ourselves the idea of their being brought into one small spot, from the polar regions, the torrid zone, and all the other climates of Asia, Africa, Europe, and America, Australia, and the thousands of islands—their preservation, and provision, and final disposal of them without bringing up the idea of miracles more stupendous than any that are recorded in Scripture."

We read of no provision in the Ark for the preservation of the inhabitants of the waters, nor, a hundred years ago, was this considered at all necessary. It was assumed that, inasmuch as the denizens of the deep and of the rivers would still be in their native element, the commingling of fresh water and salt water over the whole globe would prove no inconvenience to them. Science speaks otherwise now, however. Very few species of fish, indeed, can exist in brackish water. With the exception of some, like the salmon, which at one time is an inhabitant of the sea, and at another time an inhabitant of the river, the greater part of our salt-water and fresh-water fish would certainly have been destroyed by the conditions which a universal flood assumes to have existed. Confirmatory of this is a fact mentioned by Mr. Miller, in his Footprints of the Creator, a felicitous title to a book which demolishes many of the fallacies in the Vestiges of the Natural History of Creation. He tells us that in the lake of Stennis, in the Orkney Islands, the fish and plants on the banks have each their locality, according as the water at its junction with the sea is salt, or farther in, brackish, or still farther, fresh. And though the more hardy members of each class are sometimes to be found out of their natural

domain, there are few species which do not die when they venture beyond it. To the same effect is the testimony of General Reid, in his book on the *Law of Storms*. On the 10th of August, 1831, a fearful storm, he tells us, similar to some of those which recently ravaged St. Thomas, visited the island of Barbadoes. Such was the tremendous tempest, that the spray of the sea was carried inland for sixty miles, so that showers of salt water fell upon the land, and " the whole of the fresh-water fish in the ponds of Major Leacock died."

Nor would the vegetable kingdom fare any better than the bulk of the finny tribes in a universal deluge. Immersion for twelve months in water would be sufficient to destroy all vegetation and every seed save some of the hardier sort. From this point of view is not the olive-leaf which the dove brought in to Noah suggestive? Does it not point in the direction of a local deluge, which had not long covered the olive-tree, in the neighbourhood of which the Ark found a resting-place?

Another point, and our argument against the universality of the Deluge is closed. Whence was the water derived to encompass the globe to the mean depth of five miles above the level of the sea? Ignorant as we still are about the contents of the interior of the globe, there will be few, we presume, who will still hold with Burnet that there is a vast abyss of waters under the crust, which abyss was discharged upon the surface in the days of Noah, and absorbed into the bowels of the earth again after the catastrophe. Neither will Whiston's fanciful theory find many supporters, that the perihelion of a comet in close proximity to the earth so deranged the tides of the ocean on the surface, and the abyss in the interior of the globe, that a universal deluge was the appalling result. The general belief among those who cling to a universal deluge is, that water sufficient to accomplish the catastrophe was miraculously provided by God, and annihilated when the end for which it was created had been served. Ŧf we had any proof that such was the case, we should at once believe it. But the Mosaic narrative gives not the remotest hint of such a miraculous interposition. On the contrary, the historian distinctly specifies two causes which God was pleased to employ in execution of his judgment-the opening of the windows of heaven, an Orientalism for heavy and continuous rains; and the breaking up of the fountains of the great deep, an Orientalism for the eruption of the sea upon the land. And it is demonstrable that the utmost amount of water produced from these two sources would not inundate the globe to a depth exceeding a few inches.

It has been well remarked upon this subject that "argu-

ment is at an end when supposititious miracle is introduced." If we are to concede the right of the upholders of a universal deluge to fall back upon miraculous interpositions whenever they are hard pressed, of which interpositions we have no evidence whatever-if we are to concede this, it is vain to suppose that science and the Bible can ever be harmonized, or the intelligence of the age brought over to the side of By a supposititious miracle you can stow into divine truth. the Ark representatives of every species of beast, bird, and reptile. By a supposititious miracle you can transport them from the poles, the tropics, the temperate zones, the countless islands of the sea, to the spot where the Ark was built. By a supposititious miracle you can float them across wide and tempestuous seas, and cau reduce to plains, mountains like the Himalayahs, the Andes, and the Alps. By a supposititious miracle you can support them during the Flood with little, indeed, without any food, and can preserve fishes and plants, though conditions existed which in ordinary circumstances would have destroyed them. By a supposititious miracle, in a word, you can bring a universal deluge upon the world, and dissipate into nothingness, as with the fabled touch of a magician's wand, all the perplexing questions which might be pressed upon you. But I question whether you would thus render honour to the word and the power of God, or satisfy those thinking minds whose craving is after truth-truth which does violence neither to the revelation in Nature. nor to the revelation in the Bible-truth which recognises reason as well as faith. I have a strong conviction that this tendency among many religious people to fall back upon supposititious miracle, when objections to a universal deluge are advanced, is as unwise as it is unwarranted by the narrative in Genesis. Depend upon it, the age in which we live is not one to be satisfied with a solution of difficulties, which assumes miraculous interpositions whenever a Gordian knot presents itself.

I yield to no man in my reverence for Holy Scripture, all of which we believe to have been given "by inspiration of God." The absolute power of God over every domain of Nature we cannot doubt; and the miraculous forthputting of that power in the past we could deny only by recklessly setting sail on the tempestuous sea of an all but universal scepticism. We can conceive no limits to the power of Deity except those which indicate the boundary-line between right and wrong. But while subscribing thus heartily to a belief in the supernatural, and to the continual government of the world by God through those so-called laws of nature which are simply his

ordinary modes of operation; while thankfully accepting St. Paul's declaration that God is never far from any one of us, and that in him "we live and move and have our being," I cannot sympathize with those who would resolve all the difficulties of a universal flood by calling in the miraculous power of Deity. Scripture says nothing of such miraculous interpositions. On the contrary, it tells us that by Divine direction Noah constructed the Ark; that Noah selected and brought into the Ark those animals which were to be preserved; that Noah stored up food for himself and for them; that by the breaking up of the fountains of the deep, and the opening of the windows of heaven, a deluge was produced which destroyed the then human race, with the exception of the Noachian family. That a Divine judgment was executed upon a depraved race by the Deluge, is made sufficiently plain by the sacred history; but the means which God employed in its execution The building of the Ark, the belong not to the miraculous. collection of the animals to be preserved, the storage of their food, the eruption of the sea upon the land, and the descent of unceasing floods of rain, cannot, in the proper sense of the term, be called miracles. Hence, taking our stand upon the Mosaic history of the Deluge itself, we are entitled to protest against the procedure of those who, encompassed with inextricable difficulties in their attempt to uphold a universal flood, meet our arguments by calling in supposititious miracles. The Bible says nothing of such miracles; and we, in our argumentative straits, may not conjure them up.

BIBLICAL.

We are now face to face with the important question "What saith the Scripture?" It must be candidly acknowledged that, if taken literally, its testimony regarding the extent of the Deluge is not at all dubious. The terms in which the catastrophe is described seem, at first sight, as if they had been purposely chosen to put the universality of the Flood beyond doubt. "The waters prevailed exceedingly upon the earth, and all the high hills that were under the whole heaven were covered"; "and all flesh died, that moved upon the earth, both of fowl, and of cattle, and of beast, and of every creeping thing that creepeth upon the earth, and every man"; "Every living substance was destroyed, which was upon the face of the ground." No terms could be conceived less restricted than these. One cannot wonder, therefore, that before geological, and other considerations which go in the teeth of a universal deluge, had been brought prominently before the minds of the students of Scripture, the Biblical narrative of the Deluge was taken in its literal signification. It was believed, as Moses indeed seems to say, that the Flood overspread the whole globe; that the highest mountains upon the globe were submerged; and that every living creature, save those that were in the Ark, was destroyed. Still, it must not be forgotten, that long before geology had assumed the shape of a science, able and scholarly men, both among Churchmen and Nonconformists, had reached the conclusion that a universal flood was untenable. As early as the time of the Commonwealth, Bishop Stillingfleet wrote thus, in his Origines Sacrae :—

"I cannot see any urgent necessity from the Scripture to assert that the Flood did spread itself over all the surface of the earth. That all mankind, those in the Ark excepted, were destroyed by it, is most certain, according to the Scriptures. The Flood was universal as to mankind, but from thence follows no necessity at all of asserting the universality of it, as to the globe of the earth, unless it be sufficiently proved that the whole earth was peopled before the Flood, which I despair of ever seeing proved. And what reason can there be to extend the Flood beyond the occasion of it, which was the corruption of mankind? I grant, as far as the Flood extended, all the animals were destroyed, but I see no reason to extend the destruction of these beyond that compass and space of the earth where men inhabited, because the punishment upon the beasts was occasioned by, and could not but be concomitant with, the destruction of mankind. But (the occasion of the Deluge being the sin of man, who was punished in the beasts that were destroyed for his sake, as well as in himself) where the occasion was not, as where there were animals and no men, there seems no necessity of extending the Flood thither."

Pointing in the same direction, are the remarks of the distinguished Nonconformist, Matthew Poole, who was among the ejected in 1662, and whose *Synopsis Criticorum* is a monument of his great industry and learning :---

"It is not to be supposed," he says, "that the entire globe of the earth was covered with water. Where was the need of overwhelming those regions in which there were no human beings? It would be highly unreasonable to suppose that mankind had so increased before the Deluge, as to have penetrated to all the corners of the earth. It is indeed not probable, that they had extended themselves beyond the limits of Syria and Mesopotamia. Absurd it would be to affirm, that the effects of the punishment inflicted upon men alone, applied to places in which there were no men. If, then, we should entertain the belief that not so much as the hundredth part of the globe was overspread with water, still the Deluge would be universal, because the extirpation took effect upon all the part of the world which was inhabited. If we take this ground, the difficulties which some have raised about the Deluge fall away as inapplicable, and mere cavils, and irreligious persons have no reason left them for doubting of the truth of the Holy Scriptures."

Conclusions like these, reached by men like Stillingfleet and Poole, are peculiarly important, since it cannot be alleged that they were driven to them by what some would regard as the imperious demands of modern science. The learned prelate, and the equally learned Nonconformist whom I have quoted, were both ignorant of the state of opinion in this nineteenth century, under pressure of which we are supposed to be surrendering important outposts, essential to the successful defence of the Bible. Yet they reached the very conclusions regarding the extent of the Deluge, which we, in the light of modern science, feel ourselves shut up to. Still, the opinion of learned theologians two centuries ago will not settle this question, though they may impart confidence to us, when we are obliged to tread in their steps. Scripture itself must speak, and therefore to the Biblical narrative we return.

In all languages, the use of universal terms in a limited sense is not uncommon, but those who have studied carefully the usus loquendi of the Old Testament Hebrew and the New Testament Greek, must have been struck with the frequency of the phenomenon. Perhaps the hyperbolical phraseology characteristic of Orientals has something to do with it; but whatever the explanation may be, the fact is undoubted. Nor is there any safer principle by which to determine the true meaning of one of the sacred writers, than to compare his writings with those which proceeded from men similarly circumstanced, living in the same country, writing on the same grand themes, surrounded substantially with the same associations, and guided by the same inspiring Spirit. The usus loquendi of nineteenth century English would be a most incorrect standard by which to test the meaning of Hebrew lawgivers and prophets who lived centuries before Homer, or of men of Hebrew parentage, who wrote biographies and letters in Greek, about the time of Virgil. We must, as far as possible, denude ourselves of modern associations and modes of thought. We must endeavour to carry ourselves back to times when the earth was universally believed to be an extended plain, and when almost all that was known of it was the region extending from the Mediterranean to the plains of

Assyria. From this, the only proper stand-point, "the whole earth" will convey a very different meaning from that which its employment by a modern writer would convey; while "under the whole heaven" will assume a correspondingly restricted signification.

Examples of unrestricted terms manifestly used in a restricted sense, are so frequent in the Bible, that one's only difficulty is to make selections. In the narrative of the Deluge we are told that "all the high hills that were under the whole heaven were covered." Well, observe in what sense "under the whole heaven" is used by the very writer to whom we owe the history of the Deluge. In Deuteronomy ii. 25, we have these words of Moses :--- "This day will I begin to put the dread of thee, and the fear of thee upon the nations that are under the whole heaven, who shall hear report of thee, and shall tremble, and be in anguish because of thee." Compare this with chapter xi. 25: "There shall no man be able to stand before you, for the Lord your God shall lay the fear of you, and the dread of you upon all the land that ye shall tread upon, as he hath said unto you." These two verses compared, give us the meaning which Moses attached to the words "under the whole heaven." They are simply equivalent to "the land that ye shall tread upon"; in other words, to the land of Canaan and its contiguous tribes. The words of St. Luke, in Acts ii. 5, afford another illustration of the employment of almost the identical phraseology of Moses in a very restricted sense: "There were dwelling at Jerusalem," he writes, "Jews, devout men, out of every nation under heaven." Yet when he gives us details (verses 9-11), it is at once apparent that, like the earlier writers, he employs the words in a most limited sense. So St. Paul, when evidently referring to the chief countries in the Roman empire only, writes to the Colossians (i. 23) that the Gospel had been "preached to every creature under heaven." So far as the expression, "under the whole heaven," is concerned, then, it cannot be denied that, comparing Scripture with Scripture, we are perfectly justified in assigning to it, when necessary, a limited signification.

With respect to the declaration that "the flood was on the earth"; that "all flesh died that moved upon the earth"; that "every living substance was destroyed which was upon the face of the ground," a similar restricted meaning is allowed by the usus loquendi of Scripture. In Jeremiah li. 7, 25, 49, "all the earth" denotes the Chaldean empire. In Daniel ii. 59 it signifies the empire of Alexander the Great. In passages innumerable, which any Biblical Concordance will furnish, it means the land of Canaan. So that as little difficulty meets us in assigning to "all the earth" a limited meaning, as in assigning it to the expression "under the whole heaven."

Then in dealing with the universal terms whereby we are told that "all flesh died that moved upon the earth"—that "all in whose nostrils was the breath of life, of all that was in the dry land, died"; I cannot do better than quote from Professor Hitchcock's exhaustive review of this question :—

"In Genesis it is said that 'all countries came into Egypt to Joseph to buy corn, because the famine was sore in all lands.' This certainly could apply only to the well-known countries around Egypt, for transportation would have been impossible to the remotest parts of the habitable globe. In the account of the plagues that came npon Egypt, it is said, that 'the hail smote every herb of the field, and brake every tree of the field,' but a few days afterwards it is said of the locusts, that 'they did eat every herb of the land, and all the fruit of the trees, which the hail had left.' A like figurative mode of speech is employed in the description of Peter's vision, in which he saw a great sheet let down to the earth, 'wherein were all manner of fourfooted beasts of the earth, and wild beasts, and creeping things, and fowls of the air.' Who will suppose, since it is wholly unnecessary for the object, which was to convince Peter that the Mosaic distinction into clean and unclean beasts was abolished, that he here had a vision of all the species of terrestrial vertebral animals on the globe? It would be easy to multiply similar passages. In many of them we should find that all the earth signifies the land of Palestine."

Scripture being its own interpreter, then, there is no difficulty in explaining the history of the Deluge in perfect harmony with a limited flood. And we are bold to say that we have really no choice in the matter. The arguments against the universality of the Deluge are so various, so cumulative, so weighty; they are drawn from such indubitable facts, supplied by so many sciences, that they can be ignored only by setting science in irreconcilable antagonism to Scripture. The necessity is urgent which requires us to acquiesce in a limited deluge; and it is plain from the usus loquendi of the Sacred Books, that the narrative of the Flood may be so explained. Why should we refuse to do this, when by doing it, we do no violence to Holy Scripture, and remove objections which cannot be regarded otherwise than as fair and wellgrounded? Acknowledge that the Deluge was limited to that area which the antediluvians inhabited, and you cut away the ground from under scepticism; you satisfy the requirements of historic and scientific research; you re-assert the righteous judgment from which the catastrophe sprang; and

you do no dishonour, but the contrary, to the declarations of the Word of God.

Of course the theory of a limited deluge assumes that the then population of the globe was by no means the ten or twelve thousand millions, at which Burnet and others have estimated it; that, on the contrary, through vice and violence, it was probably reduced to comparatively small proportions, and might be swept away by a flood extending over a restricted area. Certainly, so far as the testimony of Scripture goes, we have no reason to conclude that the antediluvian population was great. Men lived then to a great age, but there is no evidence that their families were in proportion to their years. Lamech, the fifth from Cain, had by his two wives only four children. Noah, five hundred years old before he had any child, had never more than the three sons who were saved with him in the Ark; while, in his six hundredth year, though his sons were married, they had no children. And although a few cases like these would afford a very inadequate induction of facts, on which to base conclusions regarding such an intricate problem as the population of the globe at the time of the Deluge, I cannot bring myself to entertain for a moment the extravagant estimates which some even in our own day have put forward. It is almost needless to say, that all reasonings based upon the increase of population in modern times, among the Anglo-Saxon and Anglo-American races, must be fallacious when applied to the antediluvians. The rate of increase in population among different nations is so diverse, and is affected by so many disturbing influences, that the conclusions of theorists upon the subject are perfectly It is well known that the prevalence of vice to a valueless. great extent will prevent any increase in population; while a chronic state of lawlessness and violence will depopulate, not cities only, but entire tribes. Now, these two causes were in full operation in the antediluvian world—a circumstance which has been strangely overlooked by those who have directed their attention to this question. "The earth," we are told, "was corrupt"; so universally and inveterately corrupt, that not till the entire depraved race was destroyed, could the corruption be eradicated. As a consequence, too, of the prevalent corruption, the historian narrates that the earth was "filled with violence." What would be the inevitable result of such corruption and violence? Would it not be a rapid decrease in the population, such as universal vice and anarchy would certainly produce in any nation at the present day? This is exceedingly well put by Hugh Miller :----

"The terms in which the great wickedness of the antediluvians is described indicate a period of violence and outrage; the age which preceded the Flood was an age of 'giants,' and of 'mighty men,' and of 'men of renown'-forgotten Attilas, Alarics, and Zingis Khans, mayhap-'giants of mighty bone and bold emprize,' who became famous for their 'infinite manslaughter,' and the thousands whom they destroyed It has not unfrequently occurred to me-and in a question of this kind one suggestion may be quite as ad-mercy to the race than of judgment. Even in our own times, as happened in New Zealand during the present century, and in Tahiti about the close of the last, tribes restricted to one tract of country, when seized by the madness of conquest, have narrowly escaped extermination. We know that in some instances better have been destroyed by worse races—that the more refined have at times yielded to the more barbarous; yielded so entirely, that all that survived of vast populations and a comparatively high civilization have been broken temples, and great burial-mounds, locked up in the solitudes of deep forests; and further, that whole peoples, exhausted by their vices, have sunk into such a state of depression and decline that, unable any longer to supply the inevitable waste of nature, they have dropped into extinction. And such may have been the condition of the human race during that period of portentous evil and violence which preceded the Deluge. We know that the good came at length to be restricted to a single family; and even the evil, instead of being numbered, as now, by hundreds of millions, may have been comprised in a few thousands, or at most a few hundred thousands, that were becoming fewer every year, from the indulgence of fierce and evil passions in a time of outrage and violence. . . . At all events, the proof of an antediluvian population, at once enormously great and very largely spread, must rest with those who hold that its numbers and extent were such as to militate against the probability of a deluge merely partial, and any such proof we may, with the good old Bishop of Worcester, well 'despair of ever seeing' produced. Even admitting, however, for argument's sake, that the inhabitants of the Old World may have been as numerous as those of China are now-a number estimated by recent authorities at more than three hundred and fifty millions, and the admission is certainly greatly larger than there is argument enough on the other side to extort—a comparatively partial deluge would have been sufficient to secure their destruction. In short, it may be fairly concluded that, if there be a show of reason against the theory of a flood merely local, it has not yet been exhibited."

I do not know that there are any important points which I have overlooked in the consideration of this question. But for the pressure of clerical life in London, I might perhaps have been able to arrange the facts, and elaborate the arguments, in a way more satisfactory to myself. However, with all its defects, I am not without hope that this paper may assist some to arrive at a correct conclusion regarding a

historical occurrence, which has given rise to no end of controversy, and that I believe, just because theologians have clung to a theory of the Deluge, against which incontrovertible facts protest, and in favour of which not even the usus loquendi of Scripture itself can be pleaded. It is vain to say that time will bring us additional light upon this subject. The lapse of years-of centuries, can never find accommodation in the Ark for representatives of all existing species of animals, with a sufficiency of appropriate food for twelve months. The lapse of years—of centuries, can never reduce the number of species; can never alter the conditions under which plants and fishes exist; and can never remove the difficulties attendant upon the supposition that animals from every region of the globe found their way to the Ark, and after the Flood found their way back, over mountains, across oceans, thousands of miles, to their respective homes. Necessity is urgent, therefore, that theologians should frankly accept that theory of a limited flood, which satisfies science, nay, which is supported by science, and which does no dishonour to the Word of God. Every intelligent student of the Bible is aware of the difficulties which crowd round the theory of a universal deluge, and surely it is not only legitimate but wise, to accept a solution which Scripture itself sanctions.

In the number of the Sunday Magazine for December, 1868, there is an article on Genesis, from the pen of one of the most able and cultured theologians in Scotland, Dr. Lindsay Alexander. It contains a paragraph which painfully illustrates the untenable position occupied by those who, intelligent enough to understand the difficulties, are yet too timorous to accept the only possible solution. He says :--

"It is vain to attempt to make the language of Moses square with the idea of a local deluge; and the impossibility of a universal deluge seems demonstrated by the clearest evidence of science. That there was a deluge, by which the race of man was nearly swept from the face of the earth, the traditions of all nations assert; but that it happened exactly as Moses describes, and that it spread over the whole earth, is a supposition involving so many difficulties, that only on the hypothesis of a series of miracles as great as that of creation can it be entertained. That God could have covered the surface of the globe with a sheet of water many thousands of feet in depth, without leaving any permanent traces of its action, and without disturbing the relations of the earth to the planetary system; and that He could have preserved in life and health a vast multitude of animals under conditions in themselves incompatible with these, it would be presumptuous to deny. But as the Bible nowhere says that God did perform these miracles, it seems no less presumptuous to assume their occurrence. No adequate solution of the difficulty has been proposed."

Precisely what Bishop Colenso and his supporters are telling us there is no solution of the difficulty except the conclusion that the narrative of the Noachian Deluge in Genesis is untrue. This will never do. It is inexpressibly painful to see such able and excellent men as Dr. Alexander, acknowledging the impossibility of taking the language of Moses in his history of the Deluge literally, and yet declaring as emphatically, that it is impossible to make the language of Moses "square with the idea of a local deluge." What is this but doing the work of infidelity, and shutting up the intelligent mind to scepti-It is the old story over again, that the Bible has cism ? suffered as much from the well-meant interpretations of friends, as from the most malignant attacks of foes. Thank God, that we can appeal from erroneous interpretations of Scripture to Scripture itself; and that we can adopt a theory of the Deluge, which while perfectly harmonious with science, is in strict accordance with the usus loquendi of the Bible.

The CHAIRMAN.—Before calling for any observations on this very excellent paper, there is a duty in which I am sure you will all cordially join with me, and that is in passing a vote of thanks to Mr. Davison for the admirable paper he has given us. (Cheers.) I shall now be glad to hear any observations which any one may have to make.

Mr. REDDIE.-I think it may be as well that I should rise thus early to notice some parts of the paper which has just been read, as to which, I think, what is already to be found in our printed proceedings, has been unwisely ignored by the author of the paper, and especially with reference to his supposed geological proofs. Mr. Davison relies somewhat confidently upon the extinct volcanoes of Auvergne, using, in that respect, Dr. Colenso's argument, which he considers correct. But in the sixth number of our Journal of Transactions there is a Note, quoting an article published in the Quarterly *Review* in 1844, in which it will be found that the argument against a universal deluge, and in favour of the immense antiquity of the mountain-cones in Auvergne, because of their evidently never having been covered by water, is completely refuted. Those mountains, it appears, were actually erupted in the fifth century of the Christian era; and we have, of course, had no universal deluge since then. It would occupy too much time now to make long quotations from that note, and as it is already upon record in our Journal, I simply content myself by thus calling attention to it. Dr. Thornton alluded to the argument based upon the supposed antiquity of these extinct volcanoes in one of his papers,* and showed the illogical and fallacious nature of that argument ; but of this Mr. Davison takes no notice. Another of the supposed geological facts that Mr. Davison rests upon, is the slow and steady

^{*} Journal of Transactions, vol. ii. p. 155, and Note, p. 166.

rising above the level of the sea of the Scandinavian coasts. Sir Charles Lyell was the chief witness to this supposed fact, that the coast of Sweden has risen so many inches per annum; but in the Geological Magazine for the month of March last year, or thereabouts, will be found a perfect confutation of all that so-called scientific evidence. The Earl of Selkirk went over the same ground as Sir Charles Lyell, and made investigations at every place where Sir Charles had been where he supposed he had found proofs of the land having risen, as well as other parts of the coast, and the Earl found there were no such proofs of this imagined rise. All the evidence that could be gathered might just as well be used to prove the depression as the rise of land, all depending upon whether the tides happened to be high or low at the time. That fact is also on record in the scientific journal of the Geological Society of this metropolis; so that, for these two very strong so-called facts, there is really no scientific foundation at all. With reference to the former. I must briefly point out how very much depends upon it. It is not merely that we have it proved from historical testimony which is unquestionable, that the mountains of Auvergne were erupted in the fifth century of the Christian era, and that their cones are not of great antiquity; but we must recollect that the period assigned to the fossil man of St. Denise and the flint implements of the valley of the Somme, and many other supposed proofs of the antiquity of these districts of France, all vanish together, when it is proved that these mountain-cones are not of the enormous antiquity which had been assigned to them. Their age has no longer to be counted by millions or thousands of years, but only by a few hundreds. You will see, therefore, that Mr. Davison's geological proofs are by no means of that scientific character which he has assumed for them. Then, again, with reference to Professor Sedgwick's recantation of his former testimony to the universality of the Flood, I may remark that the very fact that Professor Sedgwick and Dr. Buckland did at one time hold that there were evidences of a universal flood must go for something, even if they adopted another theory afterwards. After that retractation, when they considered that the evidence in favour of the universality of the Flood was doubtful, and that the Flood might not be universal,-that is, when they took up with the nebular theory, and began to adopt the consequent theories of the vast antiquity of the various strata,-Dr. Cockburn, in 1844, at the meeting of the British Association in York, publicly challenged Professor Sedgwick and others who maintained those views, to defend them, as he was prepared, as a practical geologist, to account for all the facts of geology, in accordance with the ordinary mode of interpreting the Scriptures, including the six days' creation, and the universal flood. His challenge was not accepted, and Professor Sedgwick said he was not prepared to defend the nebular theory. In other parts of Mr. Davison's paper we are told that, in order to have a universal flood that would cover all the mountains, it must have been a flood that would have reached to five miles in height. But that is assuming that at the time of the Deluge there were mountains five miles high; and I am not certain that there is any geological evidence of that, while I think that

what evidence we have rather goes in the other direction. We certainly have it on good evidence that some most extraordinary contortions have taken place in the strata of the world. Such are those mentioned by Professor Ramsay, who says that tracts of strata, as large as half an English county, have been turned completely upside down. Sir William Logan also found evidence in Canada that upset many former theories, including that of the azoic ages. And his book shows, that there have been such marvellous contortions of the strata of the earth, that we cannot rationally conceive them to have taken place without creating great elevations as well as depressions of the earth's crust in many parts of the world ; and this would most likely affect the height of its mountains. It is clear from the way in which the earth's crust has undulated, and has been rolled up and down, and waved about in various ways, that there must have been great depressions or elevations, and probably both. Then again we can only measure the height of a mountain by the general sea-level, and very likely that also has greatly changed. There are also many exaggerated statements in Mr. Davison's paper as to the way in which ignorant or sanguine people may have formerly regarded geology. For my own part I doubt very much whether there ever were any of these sanguine spirits, who have seen in every pebble or in every fossil evidence of a universal deluge. I must confess I never met them, or even heard of them before. I remember, when young, having often watched men while quarrying; and when they have turned up "fossils" from a great depth, some of them have said, "Probably these are the results of the Flood "; but I never found them giving expression to that sanguine view, that every fossil in the world gave evidence of a universal deluge ! In the latter part of his paper Mr. Davison not only tells us that a universal deluge has been disproved by geology, but that it is impossible on other grounds; and he quotes some old and not very eminent writers to show that the idea of a universal deluge had been given up years before our scientific knowledge reached its present position, and that those who held it had to propound fanciful theories, like that of Whiston's, to support it. But I do not know why we should go back to Whiston and the others referred to. They wrote according to their own knowledge ; but even their theories were not more fanciful than some of those which we have had in our own day, and which have, for a time, been considered true. In our own time we have had the boasted nebular theory, which has had to be given up. Within a few months it has been discovered that the granite itself, contrary to all previous theories, is a metamorphosed sedimentary rock ; the very granite being nothing else than a watery deposit converted into its present state probably by the enormous pressure exerted in this globe, and by the transformations which are continually going on by crystallization. How then is it with the Deluge? Certainly we must not be too positive as to the literal words of Scripture ; but we must be equally careful not to assume that everything now put forward as scientific is real science. For my own part I have simply had to unlearn, during the last twenty years, most of the scientific geological theories I was formerly taught ; and it has been the same

with most of us. Then with regard to the number of species taken into the ark, I am certainly glad to have anything like an anti-Darwinian opinion expressed, so long as it is expressed upon good grounds ; but I believe that Mr. Darwin's theory could not have won or kept its place among naturalists at all, unless it had had some kind of foundation on actual facts, upon which the more extravagant hypothesis which goes by Mr. Darwin's name has been based. If there is anything that modern science with regard to zoology bears testimony to, it is the reverse of what Mr. Davison tells We need not suppose that every now known species was taken into us. the ark : I thought the account says only all the genera-all the animals "after their kind"; and I do not believe there were so many species in the world 4,000 or 5,000 years ago as Mr. Davison assumes. Take the case of dogs : why, you are getting new breeds every day, and, in fact, we know very little vet of these extraordinary "sports" of nature. But in order to make out as strong a case as possible, Mr. Davison gives us these large figures, as showing the number of creatures that would require accominodation in the ark :--mammalia, 1,658; birds, 6,266; reptiles, 642; and insects, about 500,000. And why does he give us these 500.000 insects ? I never heard before that insects were taken into the ark. Mr. Davison tells us correctly from the Scriptures, that "all flesh died that moved upon the earth." But insects, as a rule, occupy the air. Then he seems inclined to think that some provision must have been made in the ark for the preservation of certain fresh-water fish. We know that brackish water will kill fresh-water fish in the present day ; but in regard to the Deluge, fresh water might in many places have been kept from mixing with the salt, or greatly diluted by springs : and I am not sure that we are entitled to ignore the element of miracle to the extent that Mr. Davison seems inclined to do. On the contrary, I think that if the narrative proves anything, it certainly proves the miraculous bringing of the Flood ; and I do not think it would be wise in us to say, if the Flood was brought miraculously, that there might not have been something miraculous also in the mode of sustaining life. Then it should be remembered that animals when in a dormant condition exist for a long time without food; and so animals, when not moving about in their ordinary habitats, would be likely to live on a very small quantity of food, and not require as much as when roaming wildly through the forests. Some of the difficulties with regard to the supply of food for so large a number of animals may, therefore, be got over in that way. But I do not want to strain anything, either in the Scriptures or in science. I wish equally to avoid the misinterpretation of Scripture and the putting forward as veritable science mere conjectures and rash theories which are not worthy of the name. Certainly geology has not reached to that stage where its teaching can deserve to be called science, if we mean by science something which gives us definite knowledge. If we have any quasi-science in as yet a struggling condition, According to geology now, you have no foundation even it is geology. invented for any of the strata which have been laid down : we do not know in the least how or upon what they were first laid. We have had a theory

among geologists as to the enormous intervals of time which would be required for the formation of each stratum, but no theory has ever been put forward to account for the existence of the materials of which the strata were formed. There must have been something in existence before these superimposed strata were formed-something on which they were deposited, as well as their own materials. Geology at present tells us nothing as to either. Unless, then, you take a large view of the question, and go into the origin of matter, and make your theories consistent and complete, you will find it difficult to deal with :---unless, indeed, you accept Professor Huxley's explanation, that many superimposed strata have changed places, and that many of those things that look like fresh creations are the result of migration,-you will have the greatest difficulty in constructing a theory that will hold With regard to exegesis, though I am sorry to water for a moment. have exegesis of Scripture brought forward here, yet I know that sometimes it is impossible altogether to avoid it. But I think Mr. Davison is not very fair in his mode of using the Scriptures. Of course Matthew Poole and Bishop Stillingfleet knew nothing of the notions we have now, in the nineteenth century. That they wrote in reference to some of the notions current in their own day, is, I think, apparent from the context. But the exegesis of Mr. Davison is really not fair, and, indeed, it is scarcely worthy of his paper. He quotes from Deuteronomy ii. 25, these words of Moses :---"This day will I begin to put the dread of thee and the fear of thee upon the nations that are under the whole heaven, who shall hear report of thee and shall tremble, and be in anguish because of thee." The words "under the whole heaven" he puts in italics, and the words following are totally ignored, which completely alters the sense. The meaning is plain :---" the nations who shall hear report of thee shall be under the dread and the fear of thee." It does not say all the nations of the world, but only those "who shall hear report" of them. That is so obvious that I cannot understand why the words "under the whole heaven" should have been put in italics at all, when the next clause of the sentence so completely destroys the factitious value thus given to them. Then he quotes from the 11th chapter of Deuteronomy :---"There shall no man be able to stand before you, for the Lord your God shall lay the fear of you and the dread of you upon all the land that ye shall tread upon, as he hath said unto you." There again it is expressly stated that it is all the land they should tread upon, and not all the land under the heavens. How could they be expected to frighten people who never heard of them ? The thing is absurd. If we have Scripture appealed to, we should be very careful how we deal with it. It should be handled with the greatest reverence-

Rev. M. DAVISON.—I hope there has been no want of reverence on my part.
Mr. REDDIE.—Not intentionally, I am sure ; but I do think there has been some carelessness. Mr. Davison quotes from St. Luke :—"There were dwelling at Jerusalem Jews, devout men, out of every nation under heaven."
But surely such language does not imply a man literally from every individual nation in the world ; it only means an immense variety of persons from different nations. In the same way he quotes St. Paul, who says that the

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Gospel had been "preached to every creature under heaven"; but that only means its applicability "to every creature under heaven," for surely no man ever supposed that the Apostle intended it to be understood that he thought the Gospel had then been preached to every living man in the world ! There is also a great objection to dealing with texts of this kind from the mere expressions in our vernacular translation, for we know very well that many of these sentences would require modification if we took the Hebrew or Greek originals so far as we have got them ; and we must always further bear in mind that we have not the actual origines of either the Old or the New Testament, but only later versions, and we should therefore be all the more careful in There is a similar straining by the use of italics in dealing with exegesis. the quotation from Professor Hitchcock, on page 145 of the paper. "The hail smote every herb of the field and brake every tree." That applies only to the fields of Egypt, and not to the fields in other parts of the world; and it is not fair to put those words in italics. The passage implies only a local calamity, and not that every individual herb or tree throughout the world was smitten or broken. I have already noticed the next part of the paper summing up the arguments against the universality of the Deluge, brought from so many sources, but they are really not borne out by what we now know. I am not quite sure that we know what might be the prolificacy of the human race in those early days when men lived for so long. Certainly we should not be led to imagine that the human race were so little prolific, seeing that they, as well as the inferior animals, were created to replenish the earth. I am sorry to have had to make these remarks of an adverse kind, because the general tone of the paper is very excellent; but I think the author is one of those friends who is doing no little damage with the best intentions to do good. Mr. Davison has, I think, been a little too easy in accepting as truth many of these quasi-scientific facts, and regarding as science some things which are not worthy of the name. (Hear, hear.)

Rev. C. A. Row .-- In answer to the observations which have just been made by Mr. Reddie, let me say that I never heard him reason so illogically before. (Laughter.) One thing did astonish me, and that was his assertion. which I have seen made in one of the papers of this Society before, that the mountains of Auvergne burst out into volcanic fire in the fifth century of the Christian era. When you consider what a mighty eruption that must have been, and that it left no trace in history, you must feel astonished at this assertion. Compare it with any other similar event : take the eruption of Vesuvius. We know when that took place; and we know that it overwhelmed Pompeii and Herculaneum, and made a most prodigious impression in history, although it did not occur in an age when it would have been likely to have made a greater impression than the eruption of the mountains of Auvergne would have done. There were plenty of authors in the fifth century-writers of the Church ; and if such an eruption had taken place, it must have stamped the whole of the literature of that period from end to end-

Mr. REDDIE .- Forgive me ; I omitted to read, in order to save time, what

we have in our Journal already on this subject; but what was omitted meets so exactly the point now adduced by Mr. Row, that, not to give him the trouble of going on with an argument which is totally untenable, I will now read the passage. In the sixth number of our *Journal of Transactions* (vol. ii. page 166) will be found a note on the extinct volcanoes of Auvergne, where we have the following, alluding to an article in the *Quarterly Review* of 1844:—

"Referring to the probability that the fires of Vesuvius might have been 'quenched before the soil of Italy had been trod by the sons of Japhet,' up to the time when they again burst forth in the days of Pliny, and referring to the remarkable omission of all allusion by that precise writer to the destruction of Herculaneum and Pompeii, the reviewer goes on :-- 'Concerning the destruction of Herculaneum and Pompeii Pliny says nothing, ----.'"

This is the matter which, according to Mr. Row, ought to have made so prodigious a sensation in the history of the time !

""—an omission so singular that, as Mr. Lyell truly says, it baffles all explanation. Nor is the void of Pliny's information otherwise than most scantily supplied by the sources which might have been expected to afford us aid. Amongst the whole body of Greek and Roman writers, three only notice the entombment of these polluted communities. Our knowledge of a visitation such as no human being had beheld since the destruction of the cities of the plain, is derived merely from the casual allusion of the epigrammatist, the confused hint of Tacitus, "Haustæ aut obrutæ urbes fecundissimâ Campaniæ orâ," and the tradition reported by Dion Cassius. Had Herculaneum and Pompeii never been discovered, the accounts transmitted to us of their tragical end would therefore have been discredited by the majority of critical inquirers, so vague and general are the narratives, or so long subsequent to the event."

You see, therefore, that what Mr. Row has just been arguing has been fully considered and disposed of already. I may observe that it is Sir Charles Lyell who is here called "Mr. Lyell" in 1844.

"Mr. Lyell thereupon wisely observes : 'This case may often serve as a caution to the geologist, who has frequent occasion to weigh in like manner negative evidence derived from the silence of eminent writers, against the obscure but positive testimony of popular tradition.' Perhaps even more remarkable than the record of the first outbreak, within the historical period, of volcanic activity in the Italian peninsula are the circumstances attending the memorials of the last known occurrence of such phenomena in Central France. During three years (458-460) Auvergne and Dauphiné were convulsed by violent and continued volcanic eruptions; streams of lava, bursting forth from the summits of the mountains, broke down the cones, which ejected continuous ignited showers, attended by earthquakes, shaking, as it were, the foundations of the earth. Thunders rolled through the subterranean caverns; so awful were the concussions, the sounds, the fires, that the beasts of the forest, driven from their haunts, sought refuge in the abodes of mankind. Strange as it may seem, these phenomena are commemorated by the usages of the Church, and inscribed in the pages of our Liturgy."

The argument Mr. Row was proceeding to urge from the supposed silence of contemporaneous writers with regard to the eruptions of the mountains of Auvergne, is therefore already disposed of. He is simply wrong. The article in the *Quarterly* is a long one, well worthy of consideration; and I am only surprised that Mr. Row has not paid attention to it.

Mr. Row.—I have read it. But what I said, according to Josephus, is unquestionable; and we know that Drusilla and her son Felix perished in the eruption of Vesuvius. But I will not accept the assertion in the *Quarterly Review* as true, because I do not think the *Quarterly Review* can always be quoted as an unquestionable authority for facts—

Mr. REDDIE.—Do you assert that Josephus mentions the eruption of Vesuvius ?

Mr. Row.—You will find the matter distinctly stated in Dean Alford's Greek Testament. In such an age as the fifth century, if there had been an eruption of the mountains of Auvergne, it would have produced an immense effect upon the literature of the period; yet we do not find in any of the great Church writers of that period any reference to such a phenomenon—

Mr. REDDIE.-I beg your pardon. The reviewer proves just the contrary.

Mr. Row.—Well, if such a thing actually took place, it must have impressed itself more on the history of the period. Then Mr. Reddie seems to think that we should only look to philosophy, and endeavour to be always warring against it. But there is another issue raised when theologians come forward ; we must then endeavour to show what the Bible says and means. I would draw Mr. Reddie's attention to the fact that some of his criticisms will not hold water at all. I wish Mr. Davison would read at this moment, for the benefit of the meeting, one or two little extracts which are important in a criticism of this kind, but which I cannot see to read myself——

Mr. DAVISON.-I will read them in my concluding remarks.

Mr. Row.—Very well. They are important in relation to any verbal criticism of the Old Testament, and are the result of much patient labour on the part of a friend of mine. How often do you think the word "world" is used in the Old Testament? I believe the word "earth" is used in the books of Moses some eight hundred times——

Mr. REDDIE.—Is it the word eretz that is so used ?

Mr. Row.--Yes. As to the words used by St. Luke, "And there were dwelling at Jerusalem Jews, devout men, out of every nation under Heaven," it is plain that that cannot be taken literally; but it must be borne in mind that in the New Testament exceedingly popular language is often nsed. I do not want to go into that portion of the subject, but I must take the strongest exception to Mr. Reddie's readiness to multiply miracles. I do not think we are justified in assuming miracles when miracles are not mentioned. It seems to have been against the practice of our Lord to multiply miracles : there are many places in the New Testament where you would expect a miracle to happen, but it does not come to pass. There has always been a great economy of miracles. Nothing can be worse than to construct hypotheses upon supposititious miracles of which the Scriptures say nothing whatever. I do not go with Mr. Davison in saying that the Scriptures do not lead us to believe that the Flood was brought on miraculously; but we have no right to assume a number of other miracles when there is nothing in the Scriptures to lead to that assumption. The Bible asserts that there were only two agencies used in the Flood : the fountains of the great deep were broken up, and the rain descended from the heavens. Noah was directed to get provisions for the sustenance of those in the ark; there was certainly no miraculous agency in that, and I do not think we have any right to assume miracles where the Bible is entirely silent upon the point. It is a very serious thing to attempt to assume miracles which the Scriptures do not assert.

Rev. Dr. RIGG .- Mr. Row has made some remarks which to some extent were anticipatory of what I wanted to say, especially in regard to the economy of miracles, which is one of the principles on which we are bound to interpret the Scripture. The more we study it the more we shall come to this conclusion, that the economy of miracles is a principle in all the procedures of the Divine Hand. I confess that in the whole I agree with Mr. Davison's paper, and I have held those opinions for many years. I feel that we owe very much to the men who, long ago, were bold enough to face a great deal of obloquy for the sake of looking fairly at science and at the language of Scripture, with a view to discern whether there were really any discrepancies between the two. It appears to me that the whole aspect of the narrative of the Flood is that of something miraculously begun, and done with great rapidity, but yet carried on in a sense calmly and peacefully upon the earth. The more we study the whole expression of the narrative, the less we shall think it consistent with depressions and upheavals to be extended all over the world, and producing contortions of strata in all different, opposite, antipodal parts of the earth. Even the olive-leaf brought into the ark by the dove seems to me to tell its own tale. Whilst the fountains of the deep were broken up, and whilst the rains descended to aid the growth and increase of the Flood itself, what followed must be described as having had a gradual character. Then, I never could understand, since I began to study the question at all, that it was in harmony with the principles of Providence that the Flood should have extended beyond the site at that time occupied by Then, I think the difficulties in regard to genera and the family of man. species have been very much increased, not as a matter of fact, but, in our view of them, by modern researches. I do not think that to say they were genera and not species would remove the difficulty, because true species are separate and independent; and, in fact, genera are not found as genera anywhere, but only as species. The genus is an idea embodied in the species which belong to it, and therefore I apprehend that there must have been as many pairs as there were species, provided they were true species. No doubt Mr. Darwin's theory has received sufficient support from scientific men to show that there must be some truth in it. It would certainly diminish the number of species there may have been at the time of the Flood ; but, looking to the laws of habitat, and looking, above all, to the principles of which Mr. Row has spoken as to the economy of miracles in the Divine procedure, I think we are not compelled to believe in a universal, world-embracing flood. It is far better, more reasonable, and more religious that we should take the

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other view of it. That is the opinion I have in regard to the matter. As to geology, I think we are much indebted to Mr. Reddie for his knowledge of geology in tracking the subject out for us from time to time, and placing his finger upon points of contradiction. And yet we must admit that geology, though not a completely ordered science, has established a number of principles which can hardly be denied; and not only a number of principles but a general order of strata with their proper fossils, notwithstanding very many lacunæ or apparent exceptions in sections of the vast field, of which all the facts are not yet thoroughly ascertained and studied. It does not serve us, in our study of Scripture, that we should seem disposed to deny so much, and allow solidity to so little in this or in any other science. Then, I must differ from Mr. Reddie as to the argument drawn from the language of the Bible. He quotes the passage from Deuteronomy :---"This day will I begin to put the dread of thee and the fear of thee upon the nations that are under the whole heaven, who shall hear report of thee and shall tremble and be in anguish because of thee." Mr. Reddie attacks Mr. Davison upon that simply because he does not take his view of it; but I must confess I prefer the view of Mr. Davison. I understand that passage to mean :--- "This day will I begin to put the dread of thee and the fear of thee upon the nations that are under the whole heaven"-the nations, that is, so far as your knowledge from your centre extends. (Hear, hear.) That, I apprehend, is the meaning of the passage, and then is added this distinct and emphatic form, for the sake of comforting, and encourging, and heartening them :---" The nations that are under the whole heaven, who shall hear report of thee, and shall tremble and be in anguish because of thee." I understand that there are two parts to that promise-first, that fear and dread shall be put upon the other nations under the whole heaven, and then the promise is amplified :---" Those nations who shall hear report of thee, and shall tremble and be in anguish because of thee." It seems to me a most majestic and emphatic promise ; but the last part of it seems to me a mere amplification-

Mr. REDDIE.—Surely even that does not justify the interpretation given in the paper ?

Dr. RIGG.—I apprehend that I am right; but if not, Mr. Reddie shall question me upon it by-and-by. Then, further, Mr. Reddie objects to the extract from Professor Hitchcock in the account of the plague that came upon Egypt. It is said that "the hail smote every herb of the field, and brake every tree of the field," and yet, says Mr. Reddie, "though it says every herb and every tree, it could not have meant every particular herb and every particular tree of every field." According to the literal interpretation, it means every particular herb and every particular tree within the limits conceived (hear); but what does it go on to say? Why, that in a few days afterwards came the locusts, and "They did eat every herb of the land, and all the fruit of the trees which the hail had left."

Mr. REDDIE.-Hear, hear,

Dr. RIGG.—Yes, precisely. It says in one place that the hail had left nothing, and immediately afterwards it declares that the locusts came and ate all that the hail had left! Then, there must have been something left. Here it is as plain as anybody could have it. There is a universal proposition which declares that all the herbs and trees were destroyed by the hail.

Mr. REDDIE .- "Smitten and broken."

Dr. RIGG .- It does not matter whether you say "smitten " or " destroyed"; it amounts to the same thing. In one clause you have it asserted that the hail smote every herb of the field, and in the next that the locusts ate up every herb which the hail had left. But if the hail smote every herb, how could it leave any for the locusts to eat? You may look at it for ever, but you can make nothing else of the passage if you are to have a literal interpretation. It is perfectly clear. You have it first declared that the hail smote every herb of the field, and then that after every herb had been so smitten the locusts came and ate up every herb in the same field. But this is an old story that has been noticed long ago. It teaches us that a universal phrase is sometimes used in the Scriptures in an accommodated and limited sense. It is for that purpose it has been used here, and that passage is fully to the point. Nothing can be more clear and decisive to prove that a universal expression is employed in a limited sense. Then there is the passage :--- "There were dwelling at Jerusalem Jews, devout men, out of every nation under heaven." Mr. Row has given as much study to the language of the Scriptures as most men, and especially to the language of the New Testament, and I must say I agree with him that that passage is strictly in point. The assertion is that "There were dwelling in Jerusalem Jews, devout men, out of every nation under heaven." Mr. Reddie says that no one supposes that is to be interpreted precisely, because no one supposes it is meant universally. Therefore I say it is the more pungent illustration that there are phrases in Scripture having a universal sound, and a literal meaning, which are not to be understood in a universal sense. That is the very point Mr. Davison is aiming to prove, that you may use expressions currently which you have been so much accustomed to understand in an accommodated sense, that you do not perceive they are so much more universal than others. That is an absolutely universal phrase : "Out of every nation under heaven"; but yet no one supposes there were dwelling in Jerusalem Jews out of every nation in the world. Then there is the phrase, that the Gospel had been

preached to every creature under heaven." Mr. Reddie says no one supposes that the Gospel had been then preached to every living creature. Exactly so; and that is the reason why Mr. Davison has quoted the passage, because no one supposes it to have had a universal meaning. Therefore it is that that particular phrase is quoted as an instance of a universal phrase which has not got a universal meaning. It illustrates Mr. Davison's point that you may have phrases universal in their scope which are not to be interpreted in their full, absolute, universal meaning. But it may be asked, have the universal phrases used in describing the Flood to have no meanin at all ? I say certainly they have a meaning. When we are told in the Scriptures that "all the high hills that were under the whole heaven were covered," we are to place ourselves in the position of Noah, at his centre and with his horizon, and imagining ourselves thus, and looking upon the field as then occupied by the human family, the Flood would be to his vision The flood swept over the whole field which man inhabited, universal. covering everything he could see. For the human family as then existing it was a deluge, which "covered every high hill under the whole heaven." Now I feel warranted in saying so much to show that Mr. Davison's views are not heretical, dangerous, or novel. I think his views are sound and substantial, making allowance for incidental slips and trivial errors, and I think they are the views which are likely to prevail. But whether they are or not, I think Mr. Davison did not merit the remarks which have been made in reference to his credulity, or to his careless use of Scripture language. With regard to the fact that we have not the origines of the Scriptures in the present day, I think it should be for the enemies rather than the friends of the Bible to allege that against us. The fact that we have not the original of the Bible is no reason why we should not make the best use we can of such materials as we do possess. I think the Biblical argument is well sustained by Mr. Davison in this paper. (Hear, hear.)

The CHAIRMAN.-- Notwithstanding the objections of our excellent friend, the Honorary Secretary, I confess I am much inclined to follow the opinions of the author of this able paper. I consider that the Noachian account of the Deluge must have referred to a limited deluge, and not to a deluge involving the whole surface of the globe. If we content ourselves with the supposition that the Deluge was universal, we cannot do it without insisting on what I may call a superfluous miraculous interference with the ordinary course of nature. What does the ordinary course of nature mean ? Nothing more than the succession of pre-ordained events which have been pre-ordained by the Almighty Creator of all things, and a miracle can be only an interference with the ordinary course of natural events-that is, with the events as preordained and laid down by the Creator himself. Let me illustrate that by a single example, and take for the purpose the Marsupialia of Australia, a most remarkable class of animals. All the other mammal inhabitants of the regions on that side of the globe bring forth their young in a state of maturity, but these extraordinary animals bring forth their young in an immature condition, and they are matured by living in a pouch in proximity to the breast of the mother. It is a peculiar class of animals, and it existed originally nowhere else than in Australia. We know they can exist elsewhere, because we have them in our Zoological Gardens, where they breed their kind, and therefore they are capable of living in this climate. But if we assume a universal deluge, we must suppose that these animals were not only conveyed to the ark, but miraculously conveyed back again to their own country afterwards, which appears to me to be one of those strong cases of an inconceivable interference with the ordinary course of nature, for which we can see no necessity; and I quite agree that the interference with the course of nature is rarely had recourse to, and only where the course of events as determined by the Deity may render it absolutely necessary. There is an old quotation from a heathen poet, which is nevertheless applicable to this case, where the poet deprecates the persons of the divinities being unnecessarily introduced in the construction of their ordinary plays :---

"Nec Deus intersit, nisi vindice nodus Inciderit."—(HORACE, Ars Poetica.)

That is, never let the Deity be introduced into your poem unless something important is to be gained by such interference. It appears to me that the presumption of some such miraculous interference of the Deity with the progress and course of events, certainly does not exalt the conception which every Christain would entertain of the infinite wisdom of the Deity. I must say for myself that I am strongly inclined to take a limited view of the Noachian Deluge.

Rev. M. DAVISON.-I shall be very brief in my reply, because other gentlemen who have spoken have so completely met and overturned the arguments brought against my paper. Our esteemed and excellent honorary secretary, Mr. Reddie, has called in question some of the facts to which I had occasion to refer in my paper. He has, for example, called in question what I said about the volcanic mountains of Auvergne, and has told us that a writer in the Quarterly Review, in 1844, declares that the eruption of those mountains dates no further back than the fifth century. Now this is really a question of authorities, and Mr. Row has said emphatically that he did not believe the Quarterly Review. We must be allowed to bring against the writer in that review the authority of such men as Lyell and Miller. It is a question of authorities; and I believe the eruptions date much further back than the fifth century. With regard to the Scandinavian coast, Mr. Reddie says it has been recently ascertained that there has been no such great rising from the sea as was supposed. Well, even if we make Mr. Reddie a present of that fact, he does not doubt that there are subsidences and elevations going on; and my argument, therefore, remains untouched. With regard to the question of species, I admit that it is a difficult question, but I am not yet prepared to accept Mr. Darwin's theories, as Mr. Reddie seems disposed to do-

Mr. REDDIE .--- No, no.

Mr. DAVISON.—Then Mr. Reddie objects that the insects and some species did not require to be taken into the ark. But I would ask him, if they were not taken into the ark where did they find a habitat during the universal flood? There must have been some portion of the globe not submerged, and therefore the Deluge was partial and not universal, even on his own showing. (No, no.) Then he objects to my exegesis of the passage from Deuteronomy, as not quite fair. Dr. Rigg and Mr. Row have combated him on that point : but what have one or two texts to do with it? Mr. Reddie does not deny that the usus loquendi, both of the Old and the New Testament, is in favour of my theory. Take away a score of texts and still enough will remain to prove it. I will now read from the paper which a friend of Mr. Row's has drawn up. He finds that the word earth (eretz) occurs 821 times in the Pentateuch, 47 times in connection with the Deluge, 37 times in reference to the world in general, 50 times in reference to the soil or ground ("doubtful," he puts it), and 687 times in reference to particular countries. That shows what the usus loquendi is. So it is with reference to adama, the ground, and other words which I do not intend to touch upon. In conclusion, let me say that although one or two of the arguments may be considered doubtful, and although Mr. Reddie might have been able, if he had had longer time, to overthrow them altogether, still the argument is cumulative; it consists of many parts; and though you may prove I am mistaken in particular branches of it, still in its entirety it is so strong that you cannot resist the conclusion that the Noachian Deluge was local. I am the more convinced of this view, because our estimable secretary has only been able to nibble at details, and has not touched the fundamental principles on which my theory stands.

Mr. REDDIE.—That is all I intended to do. I did not attempt to controvert the whole paper; but whenever papers are read here, I think it necessary to point out defects in the arguments, even though I am not prepared to join issue offhand with their conclusion. Therefore, a great deal of what Dr. Rigg said fell harmless on me, because I did not undertake to oppose the paper generally; and I am content to let the arguments, *pro* and *con*, now stand for what they are worth, being certain that truth will prevail, and that truth is our common object.

The CHAIRMAN.—I am glad to find that so much real harmony exists in the midst of so much apparent discord. (Hear, hear.)

The meeting was then adjourned.